

FM (DMS) AMC TACOM APC NEW CUMBERLAND PA
TO IMA OPNS DIVISION
ARNGOPS
BENNING 3D 3D INF DIV
7 INF G3
FORSCOM G3 AVIATION DIV
III CORPS G3
LCC BUCHANAN
OPSDIR POLK
TACOM CMDTY BUS OPNS
AFPET FT BELVOIR VA
AL 8823
3 ID G4 STEWART
J3 OPERATIONS
CG TRADOC
TRADOC DOL G4
IOC USAG HI
MESSAGE CENTER
V CORPS G4
DOL FT LEWIS
INFO AMC TACOM APC NEW CUMBERLAND PA
BT
UNCLAS
UNCLAS

SUBJECT: PETROLEUM TECHNICAL ADVISORY MESSAGE #06-004 – ULTRA LOW SULFUR DIESEL FUEL (ULSD).

A. EPA ULSD PROGRAM UPDATE EPA420-F-06-037 MAY 2006

B. EPA 2007 HIGHWAY DIESEL RULE, JAN 2001, AVAILABLE AT THE FOLLOWING LINK: <http://www.epa.gov/otaq/highway-diesel/regs/2007-heavy-duty-highway.htm>

1. THIS MESSAGE SHOULD BE DISSEMINATED TO ALL ACTIVITIES RESPONSIBLE FOR ORDERING, STORING, RECEIVING, AND ISSUING DIESEL FUEL IN THE CONTINENTAL UNITED STATES.

2. THIS MESSAGE PERTAINS TO ALL MOTOR VEHICLES USED ON PUBLIC ROADS AND HIGHWAYS NATIONWIDE. EFFECTIVE 1 JUNE 2006, REFINERS OF HIGHWAY DIESEL MUST ENSURE 80% OF THE VOLUME OF HIGHWAY DIESEL FUEL THEY PRODUCE IS ULSD COMPLIANT (15 PPM SULFUR CONTENT). DIESEL FUEL CLASSIFIED AS ULSD MUST REACH DISTRIBUTION POINTS BY 1 SEPTEMBER 2006 (15 JULY 06 IN CALIFORNIA). ULSD FUEL IS EXPECTED TO BE AVAILABLE AT MANY RETAIL LOCATIONS BY 15 OCTOBER 06 (1 SEPTEMBER 06 IN CALIFORNIA)

OR SOONER. RETAIL STATIONS HAVE UNTIL 1 DECEMBER 2010 TO ENSURE ALL HIGHWAY DIESEL IS ULSD.

3. ADDITIONAL REQUIREMENTS OF THE HIGHWAY DIESEL RULE SPECIFY THAT 2007 AND LATER HIGHWAY DIESEL ENGINES BE BUILT WITH ADVANCED POLLUTION CONTROL TECHNOLOGY TO MEET 2007 EMISSION STANDARDS. 2007 AND LATER DIESEL VEHICLES WILL ONLY OPERATE PROPERLY WITH ULSD. USE OF ANY PRODUCT OTHER THAN ULSD WILL DAMAGE THE ENGINES, VOID WARRANTIES, AND COULD RESULT IN CIVIL PENALTIES. NOTE: SOME 2007 MODEL VEHICLES ARE BEING SHIPPED WITH 2006 DIESEL ENGINES THAT DO NOT REQUIRE ULSD FOR PROPER PERFORMANCE. RECOMMEND USERS CHECK THEIR VEHICLE WARRANTY AND OWNER'S MANUAL FOR CLARIFICATION.

4. DEFENSE ENERGY SUPPORT CENTER DIRECT DELIVERY FUELS (DESC-P) IS QUERYING ALL CONUS BASED FUEL VENDORS TO DETERMINE AVAILABILITY OF ULSD FOR ALL ACTIVITIES IN CONUS AND SURROUNDING TERRITORIES (I.E. GUAM AND PUERTO RICO). PC&S CONTRACTS FOR CALIFORNIA ON-ROAD DIESEL ITEMS (CLEARED OR DYED) WILL BE MODIFIED PRIOR TO AUGUST 1, 2006 IN ORDER TO MEET THE SEPTEMBER 1, 2006 EPA MANDATE THAT ALL HIGHWAY DIESEL IN CALIFORNIA MUST BE ULSD. THE REMAINDER OF CONUS CONTRACT LOCATIONS IS EXPECTED TO BE MODIFIED BY NOVEMBER 1, 2006. FOR LOCATIONS CURRENTLY RECEIVING ONLY ULSD, CONTRACTS WILL BE MODIFIED IMMEDIATELY.

5. EVEN THOUGH CONTRACT MODIFICATIONS ARE ON-GOING, ACTIVITIES ARE INSTRUCTED NOT TO REGRADE EXISTING LOW SULFUR DIESEL (LSD) TANKS/DISPENSERS TO ULSD UNTIL TANK CONVERSION PROCEDURES OUTLINED IN PARAGRAPH 9 OF THIS MESSAGE ARE COMPLETED. PRODUCT MAY NOT BE ISSUED AS ULSD UNTIL TEST RESULTS INDICATE THAT THE TOTAL PRODUCT IN STORAGE TANKS IS 15 PPM OR LOWER. AS TANKS COME INTO COMPLIANCE WITH THE 15 PPM STANDARD, FUEL SHOULD BE GRADED AS ULSD AND RETAIL DISPENSERS LABELED IAW PETROLEUM ADVISORY MESSAGE #06-003- EPA DECAL REQUIREMENT.

6. DESC-BP HAS ESTABLISHED THE FOLLOWING PRODUCT CODES BELOW FOR ULSD. THE PRODUCT SPECIFICATION APPLICABLE TO THESE STOCK NUMBERS IS ASTM D 975.

<u>NSN</u>	<u>PRODUCT CODE</u>	<u>NOMENCLATURE</u>
9140-01-524-0139	DS2	DIESEL FUEL GRADE 2-D (S15) (SUMMER)
9140-01-524-5174	DS1	DIESEL FUEL GRADE 1-D (S15) (WINTER)
9140-01-541-6760	DSS*	DIESEL FUEL GRADE 2-D (S15) (SUMMER)
9140-01-541-6767	DSW*	DIESEL FUEL GRADE 1-D (S15) (WINTER)
9140-01-541-9543	TXU	TEXAS LOW EMISSION ULSD (SUMMER)
9140-01-541-9557**	TXR	TEXAS LOW EMISSION DYED ULSD (SUMMER)

* DYED, UNTAXED DIESEL GRADES

** DYED, UNTAXED DIESEL GRADE FOR TEXAS

7. EFFECTIVE AUGUST 1, 2006 THE STANDARD PRICE FOR THE SUMMER AND WINTER GRADES OF LOW SULFUR DIESEL AND ULTRA LOW SULFUR DIESEL WILL BE CHANGED AS FOLLOWS:

DS2, DSS, AND TXU WILL BE REDUCED FROM \$2.64 TO \$2.47

DS1, DSW, AND TXR WILL BE REDUCED FROM \$2.91 TO \$2.56

8. IF CURRENT PC&S VENDORS CANNOT SUPPLY ULSD IN SUFFICIENT TIME TO PERMIT CONVERSION FROM HIGHER SULFUR DIESEL, ADDITIONAL STEPS WILL BE TAKEN BY DESC TO EXECUTE AN OPEN MARKET PURCHASE/EMERGENCY FUEL BUY UNTIL ANOTHER LONG TERM CONTRACT CAN BE ESTABLISHED TO ENSURE YOUR ACTIVITY IS IN COMPLIANCE WITH THE EPA MANDATE. IF YOU CANNOT EMPTY TANKS QUICKLY ENOUGH TO MEET THE ULSD SWITCH, HIGHER SULFUR DIESEL PRODUCTS CAN BE TRANSFERRED TO HEATING FUEL TANKS IF POSSIBLE; HOWEVER, PRIOR APPROVAL FROM DESC-FI INVENTORY DIVISION MUST BE OBTAINED FOR CAPITALIZED PRODUCT.

9. IN PREPARATION FOR THIS CONVERSION, THE FOLLOWING RECOMMENDATIONS ARE PROVIDED:

A. THIS POLICY OUTLINES PROCEDURES FOR INSTALLATIONS TO CONVERT THEIR TANKAGE FROM 500 PPM SULFUR LSD PRODUCT TO THE NEW 15 PPM SULFUR ULSD PRODUCT. IT IS INCUMBENT ON INSTALLATIONS TO PROPERLY PREPARE FOR THIS CONVERSION BY ANALYZING THEIR TIME LINE FOR RECEIPT OF 2007 OR NEWER DIESEL VEHICLES, TANK CAPACITY, BASE CONSUMPTION RATE, CLEANING/MAINTENANCE SCHEDULES AND KNOWLEDGE OF CURRENT PRODUCT BEING SUPPLIED. THE MOST FAVORABLE SCENARIO IS THAT ONCE YOUR ACTIVITY BEGINS RECEIVING ULSD, YOU ARE ABLE TO TURNOVER THE PRODUCT IN CURRENT LSD TANK(S) FIVE TIMES TO ACHIEVE THE 15 PPM SULFUR CONTENT FOR ULSD.

NOTE: ALTHOUGH TANK CLEANING IS NOT REQUIRED FOR CONVERSION OF TANKS TO ULSD, IF THE REGULAR SCHEDULED INTERVAL FOR TANK CLEANING IS DUE TO TAKE PLACE WITHIN A MATTER OF THREE MONTHS, INSTALLATIONS SHOULD TAKE ADVANTAGE OF THE TIMING TO MOVE FROM THE 500 PPM GRADE DIESEL TO THE NEW 15 PPM ULSD AND CLEAN THE TANKS.

- (1) IF ULSD HAS BEEN DELIVERED FOR AT LEAST FIVE TANK FILLS, THEN TAKE AN ALL-LEVEL SAMPLE FROM THE STORAGE TANK AND SUBMIT THE SAMPLE FOR SULFUR TESTING ONLY TO THE ARMY PETROLEUM CENTER LABORATORY AT NEW CUMBERLAND, PA. PRIOR TO SAMPLE

SUBMISSION, CONTACT THE APC LAB AT THE POC NUMBER PROVIDED TO OBTAIN SPECIFIC SUBMISSION INSTRUCTIONS. IF THE TEST RESULTS CONFIRM THAT THE SULFUR CONTENT IS 15 PPM OR LOWER, REGRADING TO ULSD CAN OCCUR IMMEDIATELY.

NOTE: THE BEST CASE SCENARIO PROVIDED ABOVE WOULD BE TO GRADUALLY MOVE FROM ONE PRODUCT TO THE NEXT WITH VERY LITTLE INTERRUPTION TO NORMAL OPERATING PROCEDURES. UNFORTUNATELY THIS IS NOT ALWAYS POSSIBLE. THE FOLLOWING PROCEDURES SHALL BE OBSERVED WHEN THE CONDITIONS IN "1" DO NOT APPLY.

(2) CONVERSION OF STORAGE TANKS THAT CONTAIN LSD PRODUCT

(A) TAKE THE LSD TANK(S) DOWN ANTICIPATING THE COMPLETION OF THE DRAW DOWN TO BE ACCOMPLISHED JUST AFTER THE CONTRACT MODIFICATION IS COMPLETED. DRAW DOWN TO THE LOWEST POINT POSSIBLE, BUT FOR THE BEST RESULTS NO MORE THAN 10% OF THE TANK'S CAPACITY SHOULD REMAIN. IF THE ABILITY EXISTS TO STRIP THE BOTTOMS OUT OF THE TANK, THIS WILL HELP EXPEDITE THE CONVERSION PROCESS. REMOVE LSD PRODUCT FROM ANY ISOLATED OR DEAD-LEG PIPELINE SECTIONS BEFORE FILLING WITH ULSD. IF ONLY ONE LSD TANK IS LOCATED AT THE INSTALLATION, WE DO NOT RECOMMEND STRIPPING ALL PRODUCT OUT OF THE TANK UNLESS AN ALTERNATE SUPPLY SOURCE IS AVAILABLE UNTIL ULSD IS ORDERED AND RECEIVED. ON INSTALLATIONS WITH ONLY ONE DIESEL STORAGE TANK, OR WITH A VERY LOW TURNOVER RATE SPECIAL PRECAUTIONS WILL NEED TO BE TAKEN TO ENSURE A SMOOTH TRANSITION. IF TEMPORARY STORAGE IS AVAILABLE, INSTALLATIONS SHOULD CONSIDER UTILIZING THIS STORAGE FOR INCOMING ULSD UNTIL SUCH TIME THAT THE 500 PPM DIESEL IS DRAWN DOWN AND THE CONVERSION CAN BE ACCOMPLISHED.

(B) RECEIVE ULSD, CHECKING ALL PAPERWORK BEFORE OFFLOADING; ENSURING THE 15 PPM SULFUR CONTENT IS ANNOTATED.

(C) AFTER COMPLETION OF RECEIPT(S) OBTAIN AN ALL-LEVEL SAMPLE AND SEND TO THE APC LABORATORY FOR SULFUR ANALYSIS. IF THE TANK WAS STRIPPED INITIALLY OF ALL LSD, TESTING IS RECOMMENDED AFTER THE FIRST COMPLETE FILL OF THE TANK. IF NO STRIPPING OF LSD WAS PERFORMED THAN TESTING IS RECOMMENDED INITIALLY AFTER THE SECOND COMPLETE FILL OF THE TANK.

(D) IF THE SAMPLE RESULTS SHOW THAT THE SULFUR CONTENTS OF THE TANK IS BELOW 15 PPM; CONTACT APC OPERATIONS AT NUMBERS PROVIDED FOR REGRADE INSTRUCTIONS OF LSD TO ULSD. DO NOT REGRADE ANY LSD TO ULSD WITHOUT THE APPROVAL OF THE APC.

(E) IF THE SAMPLE RESULTS SHOW THE SULFUR CONTENT ABOVE 15 PPM, REPEAT STEPS 2. (A) THRU (C) UNTIL SUCH TIME A SAMPLE ANALYSIS SHOWS THE TANK HAS REACHED THE DESIRED 15 PPM SULFUR LIMIT.

(F) PROCEED THROUGH ALL LSD TANKS AT THE INSTALLATION UNTIL ALL REQUIRED LSD TANKS HAVE BEEN SUCCESSFULLY CONVERTED.

NOTE: FOR LARGE BULK STORAGE TANKS, SEVERAL RECEIPTS OF ULSD MAY BE REQUIRED TO REACH THE DESIRED 15 PPM SULFUR CONTENT. FOR THESE AND ANY OTHER ISSUES THAT MAY BE ENCOUNTERED, PLEASE CONTACT THE ARMY PETROLEUM CENTER TO FORMULATE A PLAN TO FACILITATE THE CONVERSION WITH MINIMUM OPERATIONAL IMPACT.

10. DUE TO THE EXTENSIVE REFINING PROCESS TO PRODUCE ULSD, THE CONDUCTIVITY LEVEL OF ULSD IS SLIGHTLY LOWER THAN LSD. ACTIVITIES NEED TO ENSURE ULSD IS HANDLED IAW SAFETY REQUIREMENTS OF FM 10-67-1.

11. THE FOLLOWING APPLIES TO UNITS WITH BIO-DEISEL:

A. THE BIO COMPONENT OF BIODIESEL CONTAINS NO SULFUR. ALL OF THE SULFUR IN THE B20 BLENDED PRODUCT COMES FROM THE DIESEL COMPONENT. THEREFORE, IF B20 WILL BE USED TO POWER ON-HIGHWAY 2007 OR LATER VEHICLES, THE ACTIVITY MUST PROVIDE A REQUEST THROUGH APC TO DESC-P CONTRACTING STAFF TO CHANGE TO B20 MEETING THE ULSD SULFUR STANDARD. THE PRODUCT CODE WILL NOT CHANGE.

12. THE FOLLOWING POC'S AT THE USAPC CAN PROVIDE ADDITIONAL INFORMATION:

OPERATIONS	DSN 427-5171/5169/0694
TECHNICAL	DSN 771-8580
FACILITIES	DSN 427-0651/0646/0648
QUALITY	DSN 427-0659
LABORATORY	DSN 771-6511/6486